RECEIVED

JUL 2 6 2002

TECH CENTER 1600/2900

Page 1 of 8

1644

1600

ENTERED

RAW SEQUENCE LISTING
PATENT APPLICATION: US/09/397,342A

DATE: 07/22/2002
TIME: 13:58:26

p#18

Input Set : **A:\P1626R1.txt**
Output Set: **N:\CRF3\07222002\I397342A.raw**

```
 3  <110> APPLICANT: Adams, Sean
 4        Pan, James
 5        Zhong, Alan
 7  <120> TITLE OF INVENTION: UCP4
 9  <130> FILE REFERENCE: P1626R1
11  <140> CURRENT APPLICATION NUMBER: US 09/397,342A
12  <141> CURRENT FILING DATE: 1999-09-15
14  <150> PRIOR APPLICATION NUMBER: US 60/101,279
15  <151> PRIOR FILING DATE: 1998-09-22
17  <150> PRIOR APPLICATION NUMBER: US 60/114,223
18  <151> PRIOR FILING DATE: 1998-12-30
20  <150> PRIOR APPLICATION NUMBER: US 60/129,674
21  <151> PRIOR FILING DATE: 1999-04-16
23  <160> NUMBER OF SEQ ID NOS: 18
25  <210> SEQ ID NO: 1
26  <211> LENGTH: 323
27  <212> TYPE: PRT
28  <213> ORGANISM: Homo sapiens
30  <400> SEQUENCE: 1
31    Met Ser Val Pro Glu Glu Glu Glu Arg Leu Leu Pro Leu Thr Gln
32     1            5                  10                  15
34    Arg Trp Pro Arg Ala Ser Lys Phe Leu Leu Ser Gly Cys Ala Ala
35                   20                  25                  30
37    Thr Val Ala Glu Leu Ala Thr Phe Pro Leu Asp Leu Thr Lys Thr
38                   35                  40                  45
40    Arg Leu Gln Met Gln Gly Glu Ala Ala Leu Ala Arg Leu Gly Asp
41                   50                  55                  60
43    Gly Ala Arg Glu Ser Ala Pro Tyr Arg Gly Met Val Arg Thr Ala
44                   65                  70                  75
46    Leu Gly Ile Ile Glu Glu Glu Gly Phe Leu Lys Leu Trp Gln Gly
47                   80                  85                  90
49    Val Thr Pro Ala Ile Tyr Arg His Val Val Tyr Ser Gly Gly Arg
50                   95                 100                 105
52    Met Val Thr Tyr Glu His Leu Arg Glu Val Val Phe Gly Lys Ser
53                  110                 115                 120
55    Glu Asp Glu His Tyr Pro Leu Trp Lys Ser Val Ile Gly Gly Met
56                  125                 130                 135
58    Met Ala Gly Val Ile Gly Gln Phe Leu Ala Asn Pro Thr Asp Leu
59                  140                 145                 150
61    Val Lys Val Gln Met Gln Met Glu Gly Lys Arg Lys Leu Glu Gly
62                  155                 160                 165
64    Lys Pro Leu Arg Phe Arg Gly Val His His Ala Phe Ala Lys Ile
65                  170                 175                 180
```

RAW SEQUENCE LISTING   DATE: 07/22/2002
PATENT APPLICATION: US/09/397,342A   TIME: 13:58:26

Input Set : A:\P1626R1.txt
Output Set: N:\CRF3\07222002\I397342A.raw

```
67    Leu Ala Glu Gly Gly Ile Arg Gly Leu Trp Ala Gly Trp Val Pro
68                    185             190             195
70    Asn Ile Gln Arg Ala Ala Leu Val Asn Met Gly Asp Leu Thr Thr
71                    200             205             210
73    Tyr Asp Thr Val Lys His Tyr Leu Val Leu Asn Thr Pro Leu Glu
74                    215             220             225
76    Asp Asn Ile Met Thr His Gly Leu Ser Ser Leu Cys Ser Gly Leu
77                    230             235             240
79    Val Ala Ser Ile Leu Gly Thr Pro Ala Asp Val Ile Lys Ser Arg
80                    245             250             255
82    Ile Met Asn Gln Pro Arg Asp Lys Gln Gly Arg Gly Leu Leu Tyr
83                    260             265             270
85    Lys Ser Ser Thr Asp Cys Leu Ile Gln Ala Val Gln Gly Glu Gly
86                    275             280             285
88    Phe Met Ser Leu Tyr Lys Gly Phe Leu Pro Ser Trp Leu Arg Met
89                    290             295             300
91    Thr Pro Trp Ser Met Val Phe Trp Leu Thr Tyr Glu Lys Ile Arg
92                    305             310             315
94    Glu Met Ser Gly Val Ser Pro Phe
95                    320
97  <210> SEQ ID NO: 2
98  <211> LENGTH: 1039
99  <212> TYPE: DNA
100 <213> ORGANISM: Homo sapiens
102 <400> SEQUENCE: 2
103   ccgagctcgg atcccgttat cgtcttgcgc tactgctgaa tgtccgtccc 50
105   ggaggaggag gagaggcttt tgccgctgac ccagagatgg ccccgagcga 100
107   gcaaattcct actgtccggc tgcgcggcta ccgtggccga gctagcaacc 150
109   tttcccctgg atctcacaaa aactcgactc caaatgcaag gagaagcagc 200
111   tcttgctcgg ttgggagacg gtgcaagaga atctgccccc tataggggaa 250
113   tggtgcgcac agccctaggg atcattgaag aggaaggctt tctaaagctt 300
115   tggcaaggag tgacacccgc catttacaga cacgtagtgt attctggagg 350
117   tcgaatggtc acatatgaac atctccgaga ggttgtgttt ggcaaaagtg 400
119   aagatgagca ttatcccctt tggaaatcag tcattggagg gatgatggct 450
121   ggtgttattg gccagttttt agccaatcca actgacctag tgaaggttca 500
123   gatgcaaatg gaaggaaaaa ggaaactgga aggaaaacca ttgcgatttc 550
125   gtggtgtaca tcatgcattt gcaaaaatct tagctgaagg aggaatacga 600
127   gggctttggg caggctgggt acccaatata caaagagcag cactggtgaa 650
129   tatgggagat ttaaccactt atgatacagt gaaacactac ttggtattga 700
131   atacaccact tgaggacaat atcatgactc acggtttatc aagtttatgt 750
133   tctggactgg tagcttctat tctgggaaca ccagccgatg tcatcaaaag 800
135   cagaataatg aatcaaccac gagataaaca aggaagggga ctttttgtata 850
137   aatcatcgac tgactgcttg attcaggctg ttcaaggtga aggattcatg 900
139   agtctatata aaggcttttt accatcttgg ctgagaatga ccccttggtc 950
141   aatggtgttc tggcttactt atgaaaaaat cagagagatg agtggagtca 1000
143   gtccatttta agaattctgc agatatccat cacactggc 1039
145 <210> SEQ ID NO: 3
146 <211> LENGTH: 31
147 <212> TYPE: DNA
```

RAW SEQUENCE LISTING   DATE: 07/22/2002
PATENT APPLICATION: US/09/397,342A   TIME: 13:58:26

Input Set : A:\P1626R1.txt
Output Set: N:\CRF3\07222002\I397342A.raw

```
C--> 148 <213> ORGANISM: Artificial
     150 <220> FEATURE:
W--> 151 <221> NAME/KEY: Misc-feature
     152 <222> LOCATION: 1-31
     153 <223> OTHER INFORMATION: Sequence is synthesized
     155 <400> SEQUENCE: 3
     156  cgcggatccc gttatcgtct tgcgctactg c 31
     158 <210> SEQ ID NO: 4
     159 <211> LENGTH: 34
     160 <212> TYPE: DNA
C--> 161 <213> ORGANISM: Artificial
     163 <220> FEATURE:
W--> 164 <221> NAME/KEY: Misc-feature
     165 <222> LOCATION: 1-34
     166 <223> OTHER INFORMATION: Sequence is synthesized
     168 <400> SEQUENCE: 4
     169  gcggaattct taaaatggac tgactccact catc 34
     171 <210> SEQ ID NO: 5
     172 <211> LENGTH: 1248
     173 <212> TYPE: DNA
C--> 174 <213> ORGANISM: Artificial
     176 <220> FEATURE:
W--> 177 <221> NAME/KEY: Misc-feature
     178 <222> LOCATION: 1-1248
     179 <223> OTHER INFORMATION: Sequence is synthesized
     181 <220> FEATURE:
     182 <221> NAME/KEY: unsure
     183 <222> LOCATION: 1231
     184 <223> OTHER INFORMATION: unknown base
     186 <400> SEQUENCE: 5
     187  cgttatcgtc ttgcgctact gctgaatgtc cgtcccggag gaggaggaga 50
     189  ggcttttgcc gctgacccag agatggcccc gagcgagcaa attcctactg 100
     191  tccggctgcg cggctaccgt ggccgagcta gcaacctttc ccctggatct 150
     193  cacaaaaact cgactccaaa tgcaaggaga agcagctctt gctcggttgg 200
     195  gagacggtgc aagagaatct gccccctata ggggaatggt gcgcacagcc 250
     197  ctagggatca ttgaagagga aggctttcta aagctttggc aaggagtgac 300
     199  acccgccatt tacagacacg tagttatttc tggaggtcga atggtcacat 350
     201  atgaacatct ccgagaggtt gtgtttggca aaagtgaaga tgagcattat 400
     203  cccctttgga aatcagtcat tggagggatg atggctggtg ttattggcca 450
     205  gtttttagcc aatccaactg acctagtgaa ggttcagatg caaatggaag 500
     207  gaaaaaggaa actggaagga aaaccattgc gatttcgtgg tgtacatcat 550
     209  gcatttgcaa aaatcttagc tgaaggagga atacgaaggc tttgggcagg 600
     211  ctgggtaccc aatatacaaa gagcagcact ggtgaatatg ggagatttaa 650
     213  ccacttatga tacagtgaaa cactacttgg tattgaatac accacttgag 700
     215  gacaatatca tgactcacgg tttatcaagt ttatgttctg gactggtagc 750
     217  ttctattctg ggaacaccag ccgatgtcat caaaagcaga ataatgaatc 800
     219  aaccacgaga taaacaagga aggggacttt tgtataaatc atcgactgac 850
     221  tgcttgattc aggctgttca aggtgaagga ttcatgagtc tatataaagg 900
     223  cttttttacca tcttggctga gaatgacccc ttggtcaatg gtgttctggc 950
```

RAW SEQUENCE LISTING   DATE: 07/22/2002
PATENT APPLICATION: US/09/397,342A   TIME: 13:58:26

        Input Set : A:\P1626R1.txt
        Output Set: N:\CRF3\07222002\I397342A.raw

```
      225  ttacttatga aaaaatcaga gagatgagtg gagtcagtcc attttaaacc 1000
      227  cctaaagatg caacccttaa agatacagtg ttcagtatta ttgaaatatg 1050
      229  ggcatctgca acacataccc cctattattt ctacctcttt aggaagacac 1100
      231  ctattccaca gagactgatt tatagggggc agcactttat tttttctgg 1150
      233  aaacccaagt tctctttgac tcctcttttt gtccaaaagt gatctggtcg 1200
W--> 235  gatctcacaa ggccatccaa tgagaccccg nacagcattt tctaaaga 1248
      237 <210> SEQ ID NO: 6
      238 <211> LENGTH: 58
      239 <212> TYPE: DNA
C--> 240 <213> ORGANISM: Artificial
      242 <220> FEATURE:
W--> 243 <221> NAME/KEY: Misc-feature
      244 <222> LOCATION: 1-58
      245 <223> OTHER INFORMATION: Sequence is synthesized
      247 <400> SEQUENCE: 6
      248  cgcggatccg aaatggacta caaggacgac gatgacaagt ccgtcccgga 50
      250  ggaggagg 58
      252 <210> SEQ ID NO: 7
      253 <211> LENGTH: 35
      254 <212> TYPE: DNA
C--> 255 <213> ORGANISM: Artificial
      257 <220> FEATURE:
W--> 258 <221> NAME/KEY: Misc-feature
      259 <222> LOCATION: 1-35
      260 <223> OTHER INFORMATION: Sequence is synthesized
      262 <400> SEQUENCE: 7
      263  gcgaagcttg ccatggttgg actgaagcct tcaga 35
      265 <210> SEQ ID NO: 8
      266 <211> LENGTH: 33
      267 <212> TYPE: DNA
C--> 268 <213> ORGANISM: Artificial
      270 <220> FEATURE:
W--> 271 <221> NAME/KEY: Misc-feature
      272 <222> LOCATION: 1-33
      273 <223> OTHER INFORMATION: Sequence is synthesized
      275 <400> SEQUENCE: 8
      276  cgcgaattct caaaacggtg attcccgtaa cat 33
      278 <210> SEQ ID NO: 9
      279 <211> LENGTH: 61
      280 <212> TYPE: DNA
C--> 281 <213> ORGANISM: Artificial
      283 <220> FEATURE:
W--> 284 <221> NAME/KEY: Misc-feature
      285 <222> LOCATION: 1-61
      286 <223> OTHER INFORMATION: Sequence is synthesized
      288 <400> SEQUENCE: 9
      289  gcgaagcttg ccatggacta caaggacgac gatgacaagg ttggactgaa 50
      291  gccttcagac g 61
      293 <210> SEQ ID NO: 10
```

```
       294 <211> LENGTH: 19
       295 <212> TYPE: DNA
C--> 296 <213> ORGANISM: Artificial
       298 <220> FEATURE:
W--> 299 <221> NAME/KEY: Misc-feature
       300 <222> LOCATION: 1-19
       301 <223> OTHER INFORMATION: Sequence is synthesized
       303 <400> SEQUENCE: 10
       304  aatgcctatc gccgaggag 19
       306 <210> SEQ ID NO: 11
       307 <211> LENGTH: 20
       308 <212> TYPE: DNA
C--> 309 <213> ORGANISM: Artificial
       311 <220> FEATURE:
W--> 312 <221> NAME/KEY: Misc-feature
       313 <222> LOCATION: 1-20
       314 <223> OTHER INFORMATION: Sequence is synthesized
       316 <400> SEQUENCE: 11
       317  gtaggaactt gctcgtccgg 20
       319 <210> SEQ ID NO: 12
       320 <211> LENGTH: 22
       321 <212> TYPE: DNA
C--> 322 <213> ORGANISM: Artificial
       324 <220> FEATURE:
W--> 325 <221> NAME/KEY: Misc-feature
       326 <222> LOCATION: 1-22
       327 <223> OTHER INFORMATION: Sequence is synthesized
       329 <400> SEQUENCE: 12
       330  tgctcgcgct cacgcagaga tg 22
       332 <210> SEQ ID NO: 13
       333 <211> LENGTH: 24
       334 <212> TYPE: DNA
C--> 335 <213> ORGANISM: Artificial
       337 <220> FEATURE:
W--> 338 <221> NAME/KEY: Misc-feature
       339 <222> LOCATION: 1-24
       340 <223> OTHER INFORMATION: Sequence is synthesized
       342 <400> SEQUENCE: 13
       343  gaaatcgtgc gtgacatcaa agag 24
       345 <210> SEQ ID NO: 14
       346 <211> LENGTH: 23
       347 <212> TYPE: DNA
C--> 348 <213> ORGANISM: Artificial
       350 <220> FEATURE:
W--> 351 <221> NAME/KEY: Misc-feature
       352 <222> LOCATION: 1-23
       353 <223> OTHER INFORMATION: Sequence is synthesized
       355 <400> SEQUENCE: 14
       356  ctccttctgc atcctgtcag caa 23
```

RAW SEQUENCE LISTING ERROR SUMMARY   DATE: 07/22/2002
PATENT APPLICATION: US/09/397,342A   TIME: 13:58:27

Input Set : A:\P1626R1.txt
Output Set: N:\CRF3\07222002\I397342A.raw

Please Note:
Use of n and/or Xaa have been detected in the Sequence Listing. Please review the
Sequence Listing to ensure that a corresponding explanation is presented in the <220>
to <223> fields of each sequence which presents at least one n or Xaa.

Seq#:5; N Pos. 1231

Invalid <213> Response:
Use of "Artificial" only as "<213> Organism" response is incomplete,
per 1.823(b) of New Sequence Rules. Valid response is Artificial Sequence.

Seq#:3,4,5,6,7,8,9,10,11,12,13,14,15